

forming a pinned layer structure between the first spacer layer and the pinning layer with a magnetic moment pinned by the pinning layer;

forming a nonmagnetic conductive specular reflector layer structure; and

forming a self-pinned layer between the second spacer layer and the specular reflector layer structure having a magnetic moment that can be pinned by sense current fields parallel to the magnetic moment of the pinned layer structure.

*Rule 32 C.R.
1.12.6*
43 44. A method as claimed in claim 42 wherein the making of the read head further includes:

forming a ferromagnetic second shield layer; and

forming a nonmagnetic nonconductive separation layer between the second shield layer and the first pole piece layer.

6/6/05
44 42. A method as claimed in claim 42 including:
forming the specular reflector layer structure with a first specular reflector layer composed of copper (Cu) and a second specular layer composed of silver (Ag); and
forming the first specular reflector layer between and interfacing the second specular reflector layer and the self-pinned layer.

45. A method as claimed in claim 42 including:

forming the specular reflector layer structure with a first specular reflector layer composed of copper (Cu) and a second specular reflector layer composed of gold (Au);
and;

forming the first specular reflector layer between the second specular reflector layer and the self-pinned layer.